Abstracts

The Microwave Reflective Properties of Water Surfaces--I: The Reflectivity of Smooth Water at 19.24 and 22.43 GHz as Measured with a Free-Wave Microwave Reflectometer

E.J. Thompson, R.W. Silberberg, K.W. Gray and W.N. Hardy. "The Microwave Reflective Properties of Water Surfaces--I: The Reflectivity of Smooth Water at 19.24 and 22.43 GHz as Measured with a Free-Wave Microwave Reflectometer." 1968 Transactions on Microwave Theory and Techniques 16.11 (Nov. 1968 [T-MTT]): 938-943.

The reflectivity of smooth water has been measured with a free-wave reflectometer at frequencies of 19.24 and 22.43 GHz and for temperatures between 0° and 40°C. Reproducibility of the data for water temperatures below 20°C is better than ± 0.15 percent and the absolute accuracy of the reflectometer is thought to be ± 0.5 percent. The results deviate significantly from the early reflectivity measurements of Saxton and Lane but agree to within experimental error with values calculated from the absorption cell measurements of Lane and Saxton.

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